REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 1, 3-19, 21-25, 32, 33, 37 and 38 are presented for consideration. Claims 1, 18, 21, 24, 25 and 37 are independent. Claims 34-36 have been canceled without prejudice or disclaimer. Claims 1, 18, 21, 24 and 25 have been amended to clarify features of the subject invention, while claims 37 and 38 have been added to recite additional features of the subject invention. Support for these changes and claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicant requests favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claims 1, 3-25 and 32-36 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner asserted that claims 1, 18, 21, 24, and 25 were ambiguous due to the alternative recitation of the second housing as "being installed adjacent to said first housing OR installed in an interior of said first housing." Applicant submits that claims 1, 18, 21, 24 and 25 having been amended to clarify these features (in light of the Examiner's comments) and claims 34-36 having been canceled, this rejection has been overcome and should be withdrawn.

Claims 1, 18, 21, 24, 25 and 34-36 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,559,584 to Miyaji et al. Claims 1, 3-17, 21 and 34-36 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,451,507 to Suenaga

et al. in view of the Miyaji patent. Claims 18, 19 and 22-25 were rejected under 35 U.S.C. § 103 as being unpatentable over the Suenaga et al. patent in view of the Miyaji patent, and further in view of U.S. Patent No. 5,243,377 to Umatate et al. Applicant submits that the cited art, whether taken individually or in combination, does not teach many features of the present invention as previously recited in claims 1, 3-19, 21-25 and 27-36. Therefore, these rejections are respectfully traversed. Nevertheless, Applicant submits that independent claims 1, 18, 21, 24 and 25, for example, as presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the present invention, independent claim 1 recites an exposure apparatus for exposing a substrate using a plurality of masters. The apparatus includes a stage being able to install at least one of the plurality of masters, a first housing surrounding the stage, a second housing for stocking at least one of the plurality of masters, and a third housing being allowed to communicate with both an inside space and an outside space of the first housing. The third housing is different from the first and second housings. The second housing is allowed to communicate with the third housing via the first housing, and the first and second housings are filled by an inert gas or are adapted to be evacuated.

In another aspect of the present invention, independent claim 18 recites an exposure apparatus for exposing a substrate using a plurality of masters. The apparatus includes, among other features, a stage being able to install at least one of the plurality of masters, a first housing surrounding the stage, a second housing for stocking at least one of the plurality of masters, and a third housing being allowed to communicate with both an inside space and an outside space of the first housing. The third housing is different from the first and second housings. The second

housing is allowed to communicate with the third housing via the first housing, and the first and second housings are filled by an inert gas or are adapted to be evacuated. Maintenance information of the exposure apparatus is communicated via a computer network.

In yet another aspect of the present invention, independent claim 21 recites a semiconductor device manufacturing method including the steps of installing, in a semiconductor manufacturing factory, manufacturing apparatuses, including an exposure apparatus, for performing various processes, and manufacturing a semiconductor device by performing a plurality of processes, using the manufacturing apparatuses. The exposure apparatus includes (i) a stage for holding at least one of a plurality of masters, (ii) a first housing surrounding the stage, (iii) a second housing for stocking at least one of the plurality of masters, and (iv) a third housing being allowed to communicate with both an inside space and an outside space of the first housing. The third housing is different from the first and second housings. The second housing is allowed to communicate with the third housing via the first housing, and the first and second housings are filled by an inert gas or are adapted to be evacuated.

In still another aspect of the present invention, independent claim 24 recites a semiconductor manufacturing factory including manufacturing apparatuses, including an exposure apparatus, for performing various processes, a local area network for connecting the manufacturing apparatuses, and a gateway for allowing access to an external network outside the factory from the local area network. The information about at least one of the manufacturing apparatuses can be communicated. The exposure apparatus includes (i) a stage for holding at least one of a plurality of masters, (ii) a first housing surrounding the stage, (iii) a second housing

for stocking at least one of the masters, and (iv) a third housing being allowed to communicate with both an inside space and an outside space of the first housing. The third housing is different from the first and second housings. The second housing is allowed to communicate with the third housing via the first housing, and the first and second housings are filled by an inert gas or are adapted to be evacuated.

In a still further aspect of the present invention, independent claim 25 recites a maintenance method for an exposure apparatus installed in a semiconductor manufacturing factory. The method includes steps of making a vendor or user of the exposure apparatus provide a maintenance database connected to an external network outside the semiconductor manufacturing factory, allowing access to the maintenance database from the semiconductor manufacturing factory via the external network, and transmitting maintenance information accumulated in the maintenance database to the semiconductor manufacturing factory via the external network. The exposure apparatus includes (i) a stage for holding at least one of a plurality of masters, (ii) a first housing surrounding the stage, (iii) a second housing for stocking at least one of the masters, and (iv) a third housing being allowed to communicate with both an inside space and an outside space of the first housing. The third housing is different from the first and second housings. The second housing is allowed to communicate with the third housing via the first housing, and the first and second housings are filled by an inert gas or are adapted to be evacuated.

By such an arrangement, in the present invention, the master can be transferred directly from the first housing to the second housing without going into another space and exchanging

atmospheres, because the first and second housings can be filled by an inert gas and the second housing is allowed to communicate with the third housing via the first housing. As a result, in the present invention recited in independent claims 1, 18, 21, 24 and 25, it is not necessary to exchange the atmosphere when exchanging one reticle to another reticle. Thus, the present invention increases the exchange efficiency of the reticles.

Applicant submits that the cited art does not teach or suggest such features of the present invention, as recited in independent claims 1, 18, 21, 24 and 25.

The Miyaji et al. patent, in Figure 5, shows transferring a reticle R1 from a reticle cassette RC stored in a chamber 13 to a chamber 12, evacuating the chamber 12 and causing nitrogen gas to flow into the chamber 12, and then transferring the reticle R1 to a reticle table RT. Thus, in the device in the Miyaji et al. patent, an atmosphere exchange in the chamber 12 must be performed every time a reticle R1 stocked in a reticle cassette RC is transferred to a reticle table RT, in other words, every time the reticle R1 is exchanged. As a result, the device in the Miyaji et al. patent may result in a decrease in the total throughput of the exposure apparatus.

The Suenaga et al. patent, in Figure 4, shows that the gas in the replacement chamber 174 must be exchanged each time a reticle is transferred from a reticle stocker 210 to a reticle stage RS. Thus, the arrangement in the Suenaga et al. likewise may decrease the total throughput of the exposure apparatus.

As noted above, in the arrangements in the both the Miyaji et al. patent and the Suenaga et al. patent, the atmosphere must be exchanged in a reticle transfer space (path)

between a reticle stocker and a reticle stage. Such an arrangement is significantly different than the arrangement in the present invention recited in independent claims 1, 18, 21, 24 and 25.

Accordingly, Applicant submits that neither the Miyaji et al. patent nor the Suenaga et al. patent teaches or suggests the salient features of Applicant's present invention as recited in independent claims 1, 18, 21, 24 and 25.

Applicant further submits that the remaining art cited does not cure the deficiencies noted above with respect to those patents.

The Examiner relies on the Umatate et al. patent for disclosing plural exposure apparatuses and a host system, a network interface and a computer, with information relating to each of the exposure apparatuses being communicated by a computer network. Applicant submits, however, that the Umatate et al. patent, as with the Miyaji et al. and Suenaga et al. patents, does not teach or suggest the salient features of Applicant's present invention as recited in independent claims 1, 18, 21, 24 and 25.

Still further, Applicant submits that the cited art does not teach or suggest the features of the present invention recited in newly presented independent claim 37.

In a still further aspect of the present invention, independent claim 37 recites an exposure apparatus for exposing a substrate using a plurality of masters. The apparatus includes a stage being able to install at least one of the plurality of masters, a stage housing surrounding the stage, which is filled by a first atmosphere, a stocker for stocking at least one of the plurality of masters under the first atmosphere, and a load-lock chamber being allowed to communicate with both an inside space and an outside space of the stage housing, and being able to exchange

an interior atmosphere of the load-lock chamber to an atmosphere being substantially equal to the first atmosphere and an atmosphere of the outside space of the stage housing. The load-lock chamber is different from the stage housing. The first atmosphere is an inert gas atmosphere or a vacuum atmosphere. Applicant submits that the cited art does not teach or suggest such features of the invention.

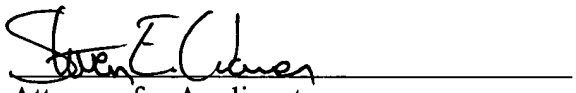
For the foregoing reasons, Applicant submits that the present invention, as recited in independent claims 1, 18, 21, 24, 25 and 37, is patentably defined over the cited art.

Dependent claims 3-17, 19, 22, 23, 32, 33 and 38 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicant further submits that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010 All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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